BUSINESS PLAN 2017–20
Energy

ACCOUNTABILITY STATEMENT

This business plan was prepared under my direction, taking into consideration the government's policy decisions as of March 3, 2017.

original signed by

Margaret McCuaig-Boyd, Minister

MINISTRY OVERVIEW

The ministry consists of the Department of Energy, the Alberta Energy Regulator, the Alberta Utilities Commission, the Alberta Petroleum Marketing Commission and the Post-closure Stewardship Fund. The ministry ensures sustained prosperity in the interests of Albertans through responsible resource development and the stewardship of energy and mineral resource systems.

- The Department of Energy enables responsible energy and mineral resource development that considers the social, economic and environmental outcomes that support Albertans' quality of life and the prosperity of the province. The department oversees Alberta's royalty and tenure systems; collects revenues from energy resource development; leads and coordinates strategic energy related policy discussions; develops strategic and integrated policies and plans for sustainable energy and mineral development; enables markets and Alberta's electricity system, and administers the Post-closure Stewardship Fund.
- The Alberta Energy Regulator is funded through an industry levy and is responsible for oil, natural gas, oil sands and coal development in Alberta. It ensures the safe, efficient, orderly and environmentally responsible development of Alberta's energy resources. This includes allocating and conserving water resources, managing public lands and protecting the environment while securing economic benefits for all Albertans.
- The Alberta Utilities Commission's operations are funded by Alberta rate payers through an administrative fee on Alberta's utilities and the independent system operator and regulates the utilities sector, natural gas and electricity markets to protect social, economic and environmental interests of Alberta where competitive market forces do not.
- The Alberta Petroleum Marketing Commission is responsible for marketing the Crown's share of crude oil production. The Alberta Petroleum Marketing Commission supports projects that economically benefit the province through improving market access or maximizing the value of Alberta's non-renewable resources.
- The Post-closure Stewardship Fund, financed by carbon capture and storage operators in Alberta, is a liability fund that became active in 2015. Its role is to help provide for the maintenance of carbon capture and storage sites by the Government of Alberta, after carbon capture and storage operations cease and the government assumes liability for any stored carbon dioxide.

A more detailed description of Energy and its programs and initiatives can be found at www.energy.alberta.ca.

STRATEGIC CONTEXT

The outcomes and key strategies identified in this business plan are aligned with the strategic direction of the Government of Alberta.

Alberta's economy is driven by energy and mineral resources and petrochemical development. The tax and royalty revenues generated by this sector fund public programs and services for Albertans. The energy and resources sector is closely tied to the activities of other industries in Alberta and across the country, contributing to job creation and investment opportunities. All Canadians benefit from a strong energy industry.

Heavy dependence on the oil and gas sector leaves Alberta exposed to the fluctuations of an international energy market over which the province has no control. Low oil and gas prices have created significant challenges for Albertans, industry and the government in recent years.

To meet these challenges, Energy is moving forward by encouraging local processing to create a broader range of energy products and get more value for Alberta's resources. Energy diversification is key to a better economic future for Alberta. The projects that were successful in receiving support from the Petrochemicals Diversification Program will create jobs and provide long-term benefits to Albertans. In October 2016, the Energy Diversification Advisory Committee was established to engage Albertans and explore opportunities for energy diversification in the province, including natural gas. This allows the province to get increased value from Alberta's resources by encouraging value-added processing right here in Alberta.

For a better economic future, Alberta is taking a leadership role on climate change. The Climate Leadership Plan builds on Alberta's position as a progressive and forward-thinking global energy provider to promote responsible use of energy and to shift to a lower carbon economy. Support of collective global efforts to reduce greenhouse emissions enhances Alberta's reputation as a responsible energy producer and will support the strong partnerships required to open up new markets for Alberta's energy products. These efforts create a better economic future, with new green jobs, green energy and green infrastructure. The Climate Leadership Plan enables policy and legislation to incent Albertans, industry and other stakeholders to reduce greenhouse gas emissions and protect Alberta's land, air and waters while pursuing economic prosperity.

Alberta will cap emissions in the oil sands and implement a world-leading methane reduction program. An economy-wide carbon price will create the right incentives to reduce emissions at the lowest overall economic cost.

The Government of Alberta has announced its plan to transition the province's electricity system to ensure it meets the needs of the future. This plan will create a modern electricity system that has reasonable, predictable prices; reduces harmful pollution to improve the health of Albertans and the environment; creates a positive investment climate to keep Alberta competitive; and remains reliable so the power is there when people flip the switch. By 2030, Alberta's electricity system will have zero emissions from coal generation and thirty per cent of its energy will be from renewable sources such as wind, solar, sustainable biomass, geothermal and hydro.

Energy is also implementing the 2016 recommendations of the Royalty Review Advisory Panel for modernizing Alberta's royalty framework by ensuring optimal returns for Albertans, the energy industry and investors. This will be achieved by removing distortions and disincentives in the system, increasing transparency and accountability, and acting on opportunities to promote diversification and create jobs. In response to industry requests, companies were able to opt in early to the modernized royalty framework. Government approved 158 new wells in 2016 for early adoption, allowing industry to make new investments or keep existing investments in Alberta, and creating jobs for Albertans.

Alberta values its current energy relations with the United States. At the same time, diversification of energy trade relationships will ensure that Alberta receives competitive pricing for its resources. Accessing new markets will increase the value of Alberta's energy products. Alberta will continue to support the construction of modern, safe and carefully regulated pipelines that carry Alberta's energy products safely and responsibly to reach new customers and

more markets within Canada and abroad. At the same time, the Government of Alberta will continue to develop and strengthen energy relationships across Canada and with partners around the world, such as in Asia, to establish new energy markets.

As the Government of Alberta navigates a challenging time for the province's economy, it will look for ways for the province's energy to enrich Albertans' lives today and for generations to come. Alberta's energy resources will continue to be a key economic driver. As a global leader, Alberta will navigate the challenges and opportunities through the innovative and responsible development of its resources to benefit all Albertans and will continue to work with Albertans and fellow Canadians, Indigenous peoples, industry, communities, and other governments on these initiatives. In order to achieve these benefits, government will consider the cumulative social, economic and environmental impacts to make balanced and informed decisions on resource management. The province is committed to doing its part in promoting efficient, responsible resource development through innovation and environmental stewardship.

OUTCOMES, KEY STRATEGIES AND PERFORMANCE MEASURES

Outcome One: Albertans benefit economically from responsible energy and mineral development and access to global markets

The ministry develops and manages policies and programs related to the province's royalty system. It accurately calculates and fully collects revenues from energy and mineral royalties, land sales, bonuses and rent. The ministry explores ways to encourage value-added processing within the province through the diversification of the energy resource value chains. The ministry continues to seek opportunities to increase access to global markets to strengthen both provincial and national economies.

Key Strategies:

1.1 Develop policies and initiatives that support the diversification of energy resource value chains and value-added processing in the province.

1.2 Enhance transparency of Alberta's royalty system.

1.3 Foster and strengthen energy-related relationships nationally and globally to emphasize Alberta's commitment to reducing carbon emissions, and to improve market access and receptivity for Alberta's energy resources and products.

Performance Measures	Last Actual 2015	Target 2017-18	Target 2018-19	Target 2019-20
1.a Revenues from oil, oil sands, gas, land sales and bonuses are fully collected • Percentage of amounts collected compared to owed	100%	100%	100%	100%
1.b Alberta's oil sands supply share of global oil consumption	2.7%	2.9%	3.0%	3.1%

Linking Performance Measures to Outcomes:

1.a It is the responsibility of the department to collect the Crown's share of energy and mineral development revenues on behalf of Albertans. This measure provides assurance that the government is collecting all revenues owed from the development of Alberta's resources.

1.b The increasing importance of Alberta oil sands in the global energy mix is a measure of success in being recognized as a responsible world-class energy supplier.

Performance Indicators	Actual (Year)	Actual (Year)	Actual (Year)	Actual (Year)
1.a Alberta's total crude bitumen production (thousands of barrels per day)	1,921.7 (2012)	2,085.4 (2013)	2,304.2 (2014)	2,526.8 (2015)
1.b Alberta's conventional crude oil and equivalent annual production (thousands of barrels per day)	672.0 (2012)	709.0 (2013)	742.8 (2014)	714.6 (2015)
1.c Alberta's total marketable natural gas annual production (billion cubic feet per day)[1]	9.80 (2012)	9.69 (2013)	9.91 (2014)	10.13 (2015)
1.d Upstream oil and gas industry investment in Alberta[2] • Total conventional and non-conventional oil and gas extraction investment ($ billion)	40.9 (2011)	47.2 (2012)	51.6 (2013)	58.1 (2014)
1.e Total percentage of crude oil leaving Alberta	84% (2012)	85% (2013)	85% (2014)	88% (2015)
1.f Total percentage of natural gas leaving Alberta[1]	66% (2012)	64% (2013)	65% (2014)	64% (2015)

Notes:

1 The Alberta Energy Regulator modified the methodology and format of the ST-3 Gas Report (effective January 2013), affecting reported actuals for performance indicators for natural gas in 1.c and 1.f.

2 The upstream oil and gas sector consists of the conventional oil and gas industry and the oil sands industry. Upstream refers to the production of oil, gas and oil sands, including entities engaged in operating oil and gas field properties, and activities such as exploring for crude petroleum and natural gas, among others. Historical Statistics Canada investment data has been revised due to methodology changes. Last actual available data is for 2014, therefore results for the indicator at this time do not reflect the significant decline in oil prices in 2015.

Outcome Two: Effective stewardship and regulation of Alberta's energy and mineral resources

The ministry engages with all stakeholders on issues involving responsible resource development of Alberta's energy and mineral resources. A strategic and integrated system approach to responsible resource development in the province strengthens the overall environmental, economic and social outcomes for the benefit of Albertans and demonstrates the province's commitment to addressing climate change. Through the Alberta Energy Regulator, the ministry regulates Alberta's energy industry to ensure the efficient, safe, orderly and environmentally responsible development and sustainable management of energy resources. Through the Alberta Utilities Commission, the ministry further supports the interests of Albertans by ensuring that the delivery and regulation of Alberta's utility service is fair and responsible.

Key Strategies:

2.1 Collaborate with other ministries to establish a balanced and sustainable approach to resource management to manage the combined or cumulative effects of resource development, including regional planning, and address increasing industry liability related to inactive, aging and orphaned wells and facilities, and reclamation timelines.

2.2 Enhance regulation and oversight to ensure the safe, efficient, effective, credible and environmentally responsible development of Alberta's energy resources.

2.3 Enhance regulation and oversight of Alberta's utilities to ensure social, economic and environmental interests of Alberta are protected by effective utility regulation.

2.4 In conjunction with the Alberta Climate Change Office, work toward the development of regulatory standards to implement Alberta's Climate Leadership Plan to reduce methane levels for the oil and gas sector by 2025.

2.5 Support development and implementation of policy and regulations from Alberta's Climate Leadership Plan to reduce oil sands emissions.

Performance Measure	Last Actual 2015	Target 2017-18	Target 2018-19	Target 2019-20
2.a Timeliness of the needs and facility applications (Alberta Utilities Commission) • Percentage of needs and facility applications determined within 180 days of the application being deemed complete	93%	100%	100%	100%

Linking Performance Measures to Outcomes:

2.a Trust in the utility regulator is enhanced by efficient regulation and oversight. This measure provides assurance that Alberta Utilities Commission regulatory decisions for approvals, permits or licences in respect of a needs identification document, transmission line or part of a transmission line are made in a timely, fair and transparent manner.

Performance Indicators	Actual 2012-13	Actual 2013-14	Actual 2014-15	Actual 2015-16
2.a Regulatory compliance (Alberta Energy Regulator)[1] • Percentage of inspections that are in compliance with regulatory requirements	n/a	n/a	99%	99%
2.b Pipeline safety (Alberta Energy Regulator) • Number of high-consequence pipeline incidents[2]	35	53	53	32

Notes:

1 The result for 2014 is based on the available data since July 2014, when the Alberta Energy Regulator began transitioning to a new compliance assurance framework.

2 High-consequence pipeline incidents include those that could have significant impacts to the public, wildlife or the environment, or that involve the release of a substance that affects a large area or body of water.

Outcome Three: Albertans benefit from a stable, reliable electricity system that protects consumers, attracts investment, and has improved environmental performance

An electricity system that has reasonable prices, eliminates emissions from coal-fired electricity, and creates a positive investment climate is vital to the social and economic foundation of Alberta. A modern electricity system is needed in Alberta to support the transition to a cleaner energy future and meet the needs of a growing province. Energy collaborates with other ministries, agencies, stakeholders, and Indigenous communities to develop and deliver effective electricity system policies and programs.

Key Strategies:

3.1 Collaborate with other ministries to implement recommendations and manage regulatory requirements from Alberta's Climate Leadership Plan to transition Alberta's electricity system to a lower carbon system, including:

- implement a plan to phase out emissions from coal fired electricity generation by 2030; and
- deliver on Alberta's commitment to 30 per cent electricity production from renewables by 2030.

3.2 Develop and implement policy to smart regulate Alberta's electricity retail system that will protect consumers, including a Regulated Rate Option that will be capped from June 1, 2017 to May 31, 2021 at no more than 6.8 cents per kilowatt hour to protect families, farms and small business from price spikes.

3.3 Create a reliable electricity system that is affordable for Albertans and attractive to investors by implementing an electricity capacity market.

3.4 Collaborate with other governments to further explore electricity interties.

Performance Measures	Last Actual 2015	Target 2017-18	Target 2018-19	Target 2019-20
3.a Transmission losses	2.9%	3.0%	3.0%	3.0%
3.b Power generation: • Margin (megawatt) between firm generating capacity and peak demand [1]	31%	Maintain a minimum 7% margin over peak demand		
3.c Percentage of electricity produced in Alberta from renewable sources (megawatts)	9.45%	30% of electricity generation from renewables by 2030		

Note:

[1] Capacity represents the maximum electric output a generating unit can produce without exceeding the design limits and is measured in megawatts. This is not the same as the amount of electricity generated over a specific period of time.

Linking Performance Measures to Outcomes:

3.a A reliable and efficient electricity transmission system is important to ensure electricity can be delivered when needed. By measuring transmission losses, the department will demonstrate to generation developers the efficient movement of electricity to market which will, in turn, build industry confidence to develop new generation infrastructure.

3.b Monitoring the development of both the growth in demand and growth in new generation capacity is fundamental for investor interest which will enable the system to stay ahead of demand and ensure adequate supply and system reliability through timely and appropriate investment in upgrading and new generating facilities.

3.c Through its policy framework, the Government of Alberta will enable the transition of the electricity system towards more renewable generation and a low-carbon electricity system.

RISKS TO ACHIEVING OUTCOMES

To increase the likelihood of achieving its outcomes, the ministry must consider and manage the key risks that may impact its ability to implement its strategies and complete its day-to-day business. The ministry follows an Enterprise Risk Management approach to identifying and managing its key risks, which include:

- The flow of capital investment into Alberta for the development of energy and mineral resources will continue to be affected by geopolitical uncertainty and continued commodity price volatility;
- The electricity system transition is a complex and multi-year exercise, requiring careful analysis and extensive collaboration; and
- Decisions on energy resource development require careful balancing of economic, environmental and social outcomes. Careful coordination across government, collaboration with Indigenous peoples, other governments, industry and other stakeholders will continue to be essential in order to maintain this important balance.

STATEMENT OF OPERATIONS

(thousands of dollars)	Comparable					
	2015-16 Actual	2016-17 Budget	2016-17 Forecast	**2017-18 Estimate**	2018-19 Target	2019-20 Target
REVENUE						
Freehold Mineral Rights Tax	79,395	71,000	69,000	**90,000**	94,000	100,000
Natural Gas and By-Products Royalty	493,032	151,000	219,000	**455,000**	304,000	523,000
Crude Oil Royalty	688,800	332,692	600,000	**476,000**	460,000	589,000
Bitumen Royalty	1,222,971	656,000	1,263,000	**2,546,000**	3,198,000	5,269,000
Coal Royalty	13,668	11,000	13,000	**12,000**	11,000	10,000
Bonuses and Sales of Crown Leases	203,267	95,000	191,000	**148,000**	144,000	134,000
Rentals and Fees	167,382	118,000	144,000	**117,000**	109,000	103,000
Energy Regulation Industry Levies and Licences	270,335	268,403	268,403	**274,847**	294,122	309,122
Utility Regulation Industry Levies and Licences	32,855	35,038	35,038	**34,929**	35,632	35,632
Investment Income	1,450	1,167	1,167	**1,167**	1,167	1,167
Other Revenue	88,047	4,976	4,976	**4,372**	4,372	4,372
Net Income from Commercial Operations	20,490	28,800	29,500	**69,000**	45,000	57,000
Ministry Total	3,281,692	1,773,076	2,838,084	**4,228,315**	4,700,293	7,135,293
Inter-Ministry Consolidations	(140)	-	-	**-**	-	-
Consolidated Total	3,281,552	1,773,076	2,838,084	**4,228,315**	4,700,293	7,135,293
EXPENSE						
Ministry Support Services	7,460	7,143	7,143	**7,140**	7,300	7,300
Resource Development and Management	101,508	91,105	90,105	**90,867**	93,625	93,975
Biofuel Initiatives	70,498	-	-	**-**	-	-
Cost of Selling Oil	77,168	156,308	78,308	**85,000**	90,000	90,000
Climate Leadership Plan	-	-	1,134,574	**34,884**	32,235	27,872
Carbon Capture and Storage	159,873	202,202	30,802	**214,984**	130,384	44,284
Energy Regulation	249,113	245,416	249,040	**251,256**	256,031	256,031
Orphan Well Abandonment	31,111	30,500	30,500	**30,500**	45,000	60,000
Utilities Regulation	33,293	36,238	36,238	**36,129**	36,832	36,832
Post-Closure Expense	-	230	230	**230**	230	230
Ministry Total	730,024	769,142	1,656,940	**750,990**	691,637	616,524
Inter-Ministry Consolidations	(460)	-	-	**-**	-	-
Consolidated Total	729,564	769,142	1,656,940	**750,990**	691,637	616,524
Net Operating Result	2,551,988	1,003,934	1,181,144	**3,477,325**	4,008,656	6,518,769
CAPITAL INVESTMENT						
Resource Development and Management	1,913	5,399	5,399	**5,399**	5,399	5,399
Energy Regulation	14,196	9,000	9,000	**9,000**	9,000	9,000
Utilities Regulation	746	1,000	1,000	**1,000**	1,000	1,000
Ministry Total	16,855	15,399	15,399	**15,399**	15,399	15,399
Consolidated Total	16,855	15,399	15,399	**15,399**	15,399	15,399